

UNCLASSIFIED

AD NUMBER	
AD393668	
CLASSIFICATION CHANGES	
TO:	UNCLASSIFIED
FROM:	CONFIDENTIAL
LIMITATION CHANGES	
TO: Approved for public release; distribution is unlimited.	
FROM: Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; 12 AUG 1968. Other requests shall be referred to Office of the Adjutant General (Army), Washington, DC 20310.	
AUTHORITY	
AGO ltr 29 Apr 1980 ; AGO ltr 29 Apr 1980	

THIS PAGE IS UNCLASSIFIED

SECURITY

MARKING

The classified or limited status of this report applies to each page, unless otherwise marked.

Separate page printouts MUST be marked accordingly.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE LAWS, TITLE 18, U.S.C., SECTIONS 793 AND 794. THE TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U.S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

THIS REPORT HAS BEEN DELIMITED
AND CLEARED FOR PUBLIC RELEASE
UNDER DOD DIRECTIVE 5200.20 AND
NO RESTRICTIONS ARE IMPOSED UPON
ITS USE AND DISCLOSURE,

DISTRIBUTION STATEMENT A

APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION UNLIMITED,

BEST COPY
AVAILABLE



CONFIDENTIAL

DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGAM-P (M) (18 Oct 68) FOR OT RD 683129

28 October 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 145th
Combat Aviation Battalion, Period Ending 31 July 1968 (U)

AD393668

SEE DISTRIBUTION

1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT RD, Operational Reports Branch, within 90 days of receipt of covering letter.
2. Information contained in this report is provided to insure that the Army realizes current benefits from lessons learned during recent operations.
3. To insure that the information provided through the Lessons Learned Program is readily available on a continuous basis, a cumulative Lessons Learned Index containing alphabetical listings of items appearing in the reports is compiled and distributed periodically. Recipients of the attached report are encouraged to recommend items from it for inclusion in the Index by completing and returning the self-addressed form provided at the end of this report.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

1 Incl
as

DISTRIBUTION:

Commanding Generals

US Continental Army Command
US Army Combat Developments Command

Commandants

US Army Command and General Staff College
US Army Air Defense School
US Army Artillery and Missile School
US Army Aviation School
US Army Infantry School
US Army Missile and Munitions School
US Army Ordnance School

Regraded unclassified when separated
from classified inclosure.

CONFIDENTIAL

"This document contains information affecting the National
Defense of the United States within the meaning of the
Espionage Laws, Title 18, U. S. C., Section 793 and 794.
It is prohibited to communicate its contents in any
manner to an unauthorized person is prohibited by law."

DISTRIBUTION (Cont'd)

US Army Signal School
US Army Southeastern Signal School

Copies furnished:

Office, Chief of Staff, US Army
Deputy Chiefs of Staff
Chief of Engineers
Chief of Research and Development
Assistant Chiefs of Staff
Research Analysis Corporation (Library)
Director, Weapons Systems Evaluation Group
Defense Documentation Center
Security Officer, Hudson Institute
USAF Air Ground Operations School
Documents Control Officer, Bell Aero Systems Company
Commanding Generals
 US Army Materiel Command
 US Army Weapons Command
 US Army Flight Training Center
Commanding Officers
 US Army Aviation Test Activity
 US Army Limited War Laboratory
 US Army Logistics, Doctrine Systems & Readiness Agency
 145th Combat Aviation Battalion

CONFIDENTIAL

DEPARTMENT OF THE ARMY
HEADQUARTERS, 145TH COMBAT AVIATION BATTALION
APO San Francisco, 96227

3

AVGC-CC

12 Aug 1968

SUBJECT: Operational Report of 145th Combat Aviation Battalion for period ending 31 July 1968 (RCS CSFOR-65) (RI) (U) (UCI:WCYNAA)

SEE DISTRIBUTION

1. (C) Section 1. Operations: Significant Activities

a. The mission of this battalion has not changed during this reporting period.

b. Organization:

(1) The 197th Medical Detachment was attached to the 135th Assault Helicopter Company 20 May 1968.

(2) The organization of the 145th Combat Aviation Battalion during the reporting period included the following units, located as indicated. (See Incl 1)

c. Significant personnel changes during the reporting period were as follows:

(1) Commanding Officer, 145th Combat Aviation Battalion, 2 Jul 68

Outgoing: LTC Robert M. Deets 079250
Incoming: LTC Gerald L. Waldron 073002

(2) Battalion Executive Officer, 1 May 1968

Outgoing: LTC Robert W. Mills 096701
Incoming: Major Edmund L. Fuchs 01936032

(3) Battalion S-1/Adjutant, 1 May 1968

Outgoing: Major Edmund L. Fuchs 01936032
Incoming: CPT William E. Bannister 05320641

(4) Battalion S-2, 8 July 1968

Outgoing: Major John E. McCown 090263
Incoming: Major Royce C. McKinney 091928

FOR OT RD
683 129

CONFIDENTIAL

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

CONFIDENTIAL

(5) Battalion S-4, 1 May 1968

Outgoing: Major Donald C. VanPietersom 02263972
Incoming: Major Charles J. Mix 04005918

(6) Commanding Officer, 118th Assault Helicopter Company, 12 July 1968

Outgoing: Major Henry C. Browning 0402487
Incoming: Major Duane C. Ingram 074280

(7) Commanding Officer, 334th Armed Helicopter Company, 22 May 1968

Outgoing: LTC Echols L. Shedden
Incoming: Major Joel J. Mikuta 074394

d. Unit Strengths as of 31 July 1968

(1) Military:

Subordinate Unit	Officer Auth O/H	WO Auth O/H	EM Auth O/H	Total Auth O/H
68th AHC	18 15	53 46	239 204	310 256
118th AHC	17 16	53 43	231 195	301 254
135th AHC	17 14	54 43	246 194	317 251
190th AHC	17 18	53 48	230 196	300 262
334th AHC	31 13	26 36	219 190	276 239
HHD	22 29	2 0	115 158	139 187
145th CAB	122 105	241 216	1280 1159	1643 1480

(2) Civilians:

Subordinate Unit	DAC Auth O/H	VN Auth O/H	3rd Auth O/H	Contractor Auth O/H
68th AHC	0 0	30 26	0 0	0 0
118th AHC	0 0	30 22	0 0	2 2
135th AHC	0 0	4 4	0 0	2 2
190th AHC	0 0	16 1	0 0	2 2
334th AHC	0 0	13 20	0 0	2 2
HHD	0 0	10 10	0 0	0 0
145th CAB	0 0	103 83	0 0	8 8

e. Aircraft Status as of 31 July 1968 (Incl 2)

f. Operational Results as of 31 July 1968 (Incl 3)

g. Awards and Decorations: The following awards were received by members of the battalion during the period 1 May 1968 through 31 July 1968.

AWARDS

NUMBER RECEIVED

SS	8
LM	0
DFC	36
SM	0

5

CONFIDENTIAL

REDS

NUMBER RECEIVED

BS ^W	6
BS	23
AM ^W	68
AM	2502
ACM ^W	14
ACM	86
PH	28

h. (C) Intelligence Situation

During the early days of May the enemy started the third phase of his general offensive. During the first 10 days of May there were 20 contacts made with VC/NVA units in and around the Bien Hoa/Siagon/Long Binh complexes. These contacts produced a confirmed body count of 1800, making a total of 5000 casualties in the III Corps area since the first of May. During the third week of May enemy activity throughout the III Corps decreased and activity in the Saigon area was limited to occasional isolated attacks and minor terrorist activities. By the end of May the general decrease in enemy activity in the local area and the increased activity in outlying provinces indicated that the majority of the enemy forces had withdrawn to base areas.

During the period 1 June to 31 July 1968, enemy activity remained light. Captured documents and POW's reports give indication that the enemy had moved to and are still in base areas receiving replacements, supplies, and preparing for another offensive. It is apparent, from the changing troop dispositions, shifting of units, and the adjustment of enemy Order of Battle, that the enemy is going through a very definite period of re-alignment. This activity is on a greater scale than the previous quiet periods between offensives or phases of offensives. While there is little firm evidence to support it, it would appear that the enemy may, in fact, be changing strategy. Considering the enemy's current strength, condition, and disposition, the possibility that the enemy will initiate a Major offensive at this time continues to be remote.

i. Operations

(1) Combat Operations:

(a) This battalion was committed daily to tasks varying from combat support missions to reinforced battalion size combat assault operations. Battalion daily requirements of aircraft per lift company have been 10 UH-1D lift helicopters, one Command and Control helicopter, one maintenance helicopter, and four armed helicopters. The 334th Armed Helicopter Company has provided four fire teams and two fireflies. Additionally, each assault company normally employs a UH-1D aircraft equipped with a smoke dispenser during each combat assault operation. A total of 366 smoke missions were flown. During this reporting period, the 145th Combat Aviation Battalion has been involved in general support of III Corps ARVN and FVMAF operating in the III Corps Tactical Zone. These missions have been primarily limited to company size elements which have been reinforced by additional armed support as necessary.

6

CONFIDENTIAL

(b) The Bien Hoa Air Base was subject to enemy rocket attacks on six occasions during this reporting period. These attacks occurred as shown below.

<u>DATE</u>	<u>NUMBER OF ROUNDS</u>	<u>DAMAGE TO BATTALION AREA</u>
7 May 68	4	3 Buildings minor damage
10 May 68	UNK	0
14 May 68	7-9	0
26 May 68	14	0
29 May 68	UNK	0
15 Jun 68	45	0

(c) During this reporting period the 145th Combat Aviation Battalion retained the responsibility of primary command and control of all armed helicopter light fire teams utilized in support of OPLAN Checkmate. A Command & Control helicopter has been flown by members of this battalion from 2300 - 0400 hours on a nightly basis in support of this plan.

j. Training

(1) Mandatory Training

(a) Mandatory training as outlined in USARV Regulation 350-1 and 12th Combat Aviation Group Regulation 350-1 is being conducted between breaks in daily missions and at night by all units of this battalion. Continual emphasis is being placed on familiarization and zeroing of individual weapons. To date, all personnel of this battalion have participated in this training.

(b) This battalion is continually emphasizing first aid for air crew members and aviator training to include aerial gunnery.

(2) Assigned Training Tasks:

(a) One VNAF aviator received a certificate of graduation at a ceremony conducted at 12th Group Headquarters during this reporting period. This individual was the only aviator that completed the 90 day training program with this battalion. Other members of his class were either transitioned in UH-1D aircraft and released or were transferred to the 214th Cbt Avn Bn to attend training designed to qualify them as instructor pilots. On 8 July six VNAF aviators joined the battalion for transition training. Three of these personnel completed training on 30 July 1968 and were released to re-join their respective units. The remaining three aviators are scheduled to complete transition training and then fly operational missions with this battalion for a period of ninety days.

(b) This battalion is receiving a limited number of quotas for attendance at the Naval Survival School in the Philippines. All assigned quotas have been filled.

(c) This battalion continues to receive newly assigned senior officers for in-country orientation and training. The duration of their stay

4
CONFIDENTIAL

CONFIDENTIAL

7
is normally two or three days. Emphasis is placed on the procedures used in planning and conducting airmobile operations and armed helicopter assaults. Individuals are afforded the opportunity to fly on each of the various missions performed by the battalion. Seven such officers received training during this reporting period.

(d) During this reporting period the 334th Armed Helicopter Company conducted a test utilizing the AH-1G Cobra on Firefly missions. The test is continuing and training is being conducted in order to continue the utilization of this aircraft for this highly specialized mission.

(3) Physical Security

The physical security plan has been revised due to the move of the battalion headquarters and three companies during the month of May. Rehearsals and practice alerts have been conducted to insure a rapid response from reactionary forces. Additionally, all bunkers have been repaired or replaced to insure complete protection. A separate telephone communications system has been installed in the battalion operation center with separate lines to each bunker and outpost. Since someposts are manned 24 hours a day, this has greatly improved the security of the battalion.

k. Signal

(1) During this reporting period the battalion signal section moved all of the command communications for the battalion headquarters from Cong Ly street to the new headquarters location at Bien Hoa Air Base.

(2) One of the primary points resultant of this move was the improvement of the battalion communications center. The center was moved from a AN/MGC-9 van to a location within the battalion headquarters building. The building is constructed of steel reinforced concrete. This provides better security for the unit's CRYPTO equipment; less failure of all sensitive equipment due to heat; and fewer "down times"; and outages due to inadequate or ineffective circuits to higher headquarters.

(3) The section installed a 90 foot telephone pole, rigged with cross arms as an antenna mast. This mast is arranged to facilitate a high frequency radio (AN/TRC-146) 30 foot whip antenna and coupler. Below the top platform on the first set of cross arms are four AT-292's for FM; and below them on the second set of cross arms are two UHF antennas.

(4) Communications within the battalion operations center were increased and remote sets were eliminated by locating the radio room adjacent to the BOC. In addition to this, the battalion FM control Net radio was also mounted through the wall so that the BOC duty officer could change channels whenever necessary. This system was further augmented by the installation of an SB-22 switchboard with hot lines to appropriate headquarters (operations sections).

CONFIDENTIAL

CONFIDENTIAL

(5) The battalion switchboard (ROTOR) has been replaced by an SB-68 with additional line packs to facilitate 90 lines. The former switchboard, an AN/TCC-10, had been declared non-repairable and was returned to the 36th Signal Battalion. To further improve customer service, all numbers were assigned to the company in block form. At the present time all unnecessary phone lines in the battalion area are being removed, and all others are being formed into cables, and wherever possible, buried.

(6) Supporting Spartan Tower since our move to Bien Hoa has resulted in several projects being accomplished. They are as follows:

(a) Installation of commercial power by PA&E. The organic generators are now used for emergency power if commercial power fails. The system, as it exists presently, may be supplied by either commercial or generator power through the use of a double-pull/double throw switch box which was installed just below the tower platform.

(b) Due to damage incurred when the tower was struck by lightning in May, it was necessary to re-wire the inside of the tower shelter. Avionics systems which were damaged were repaired by the 320th Signal Detachment and by personnel in the Air Force electronics shop here at Bien Hoa. During this major repair activity the tower continued to operate utilizing tactical radios organic to this battalion (AN/PRC-25 and AN/PRC-41).

(c) During this reporting period three pairs of obstruction lights were installed on Spartan Tower to provide warning to aircraft utilizing the heliport during the hours of darkness. In addition, a floodlight was installed which illuminates the stairs leading from the ground to the top of the tower. This light will aid in preventing accidents during the changing of operators. The light does not interfere with the landing or departing aircraft.

1. Logistics:

(1) POL: The fuel consumption rate of the AAAA refueling point at HAM TAN has increased from 3000 gallons to 4000 gallons of JP-4 per week during this reporting period. This 25% increase is due to the increase in the number of airborne operations being conducted in the HAM TAN area. A weekly flight has been coordinated with the 528th Quartermaster Company to supply fuel to the AAAA as necessary. An operational load of 10,000 gallons of JP-4 currently is being maintained at this location.

(2) Ammunition: New guide-line figures have been received from Headquarters, 12th Combat Aviation Group to be used in computing the battalion basic load and storage levels are being maintained accordingly. This change incorporates the basic load of each unit with the currently authorized operational load and allows for better management of the amount of ammunition at the battalion ammunition point.

(a) The new warheads XM-229 (17.5 lbs) and the proximity fuze (XM-429) are now authorized for operational use and are being stocked at the ammunition point. Beginning next quarter, ammunition will be requisitioned and distributed on the basis of 40% XM-229, and 60% M-151. It is anticipated that 10 to 15% of the M-151's will be equipped with the XM-429 proximity fuze.

6

CONFIDENTIAL

CONFIDENTIAL

9

(3) Construction: New vertical construction completed during this reporting period consisted of two wood buildings 20' by 60'. These buildings will be used as offices for a portion of the headquarters staff and the unit personnel section.

(a) At the present time engineers are replacing revetments which were originally built on the battalion heliport utilizing self help and CBU containers, with the Army standard revetments. The estimated completion of this project is unknown. Additionally, two technical supply buildings 20' by 90' are being constructed adjacent to the flight line. Estimated completion date of these buildings is unknown.

(b) In the battalion contonement area, units are currently constructing day rooms under the self help program. The day rooms are expected to be completed during the next reporting period.

(4) Supply: On 3 July 1968, the battalion received the NOMEX flight suits which had been requisitioned through the 1st Logistical Command. These flight suits have been issued to the aviators of this command on a two per man basis.

(5) Movement: During this reporting period the battalion completed the move of the battalion headquarters element, the 118th Assault Helicopter Company and the 334th Armed Helicopter Company from its location on Cong Ly street in the city of Bien Hoa to the area on the airbase known as Woodson Compound. This move resulted in all units of the battalion located at Bien Hoa to be quartered in the same location. The name of the battalion compound, Honour Smith Compound, was transferred to the new battalion area from Cong Ly street.

m. Safety:

(1) During the period 1 May 1968 through 31 July 1968, the 145th Combat Aviation Battalion experienced five major accidents and one incident resulting in one fatality and six injuries.

(2) In May 1968, the battalion safety office published the first issue of the monthly Aircraft Accident Prevention Bulletin. The present plan is to continue to publish the bulletin on a monthly basis and distribute it to each aviator in the battalion.

(3) During this reporting period the 145th Combat Aviation Battalion has continued to stress it's new safety program which was initiated during the previous reporting period. This program places emphasis on pilot standardization and education, and improved operational procedures. Since the program was inaugurated, the overall aircraft accident rate has been decreased by 200% compared to the past three year period.

(4) The hover check performed prior to each flight has proven to be an invaluable aid in the reduction of aircraft accidents caused by low RPM on take-off. This pre-take-off check which is used throughout the battalion has proved to be an extremely effective and reliable method of determining available take-off power.

CONFIDENTIAL

CONFIDENTIAL

10

n. Flight Standardization:

(1) During this reporting period the primary training and standardization has been focused toward the initial in-country orientation of newly assigned aviators. This training is accomplished at subordinate unit level, as well as all required training to insure an aviator's proficiency peculiar to combat operation in Vietnam.

(2) Problems still exist in the availability of qualified, experienced pilots capable of performing instructor and standardization pilot duties. The majority of the replacement aviators are recent graduates from the United States Army Aviation School and require in excess of six months to gain sufficient experience to perform these duties. The assignment of more experienced aviators would greatly enhance the effectiveness of a sound standardization program.

2. (C) Section 2. Lessons Learned: Commander's Observation, Evaluation and Recommendations.

a. Personnel: None

b. Operations:

(1) CH-47 Preparing Airmobile Operations

(a) OBSERVATION: Use of CH-47 Chinooks, integrated with UH-1 helicopters is increasing.

(b) EVALUATION: There is an increasing trend toward utilization of CH-47 Chinook aircraft in conjunction with UH-1 aircraft on airmobile operations. With the increased complexity, more coordination becomes necessary to insure a smooth and well synchronized operation. It has been observed during this type of operation that the lack of total cooperation between all units involved has been a great hinderance to the air mission Commander. To effectively plan his mission the air mission commander must know, among other things, how many sorties must be airlifted, how many CH-47's are at his disposal, the ASL of the aircraft, fuel capacity, turn around times, reporting and release times, and other mission necessary items of information. This information can only be obtained by effective coordination with the attached aviation unit.

(c) RECOMMENDATION: When airmobile missions involving CH-47 aircraft are assigned by A.E the designation of the supporting CH-47 unit should be supplied to the airmobile unit conducting the operation. This would allow the air mission commander to coordinate with all units involved in the operation and result in a more effective operation and more efficient support.

(2) Firefly Utilization

(a) OBSERVATION: Utilization of Firefly is becoming ineffective.

(b) EVALUATION: The utilization of firefly in the III Corps

8
CONFIDENTIAL

CONFIDENTIAL

tactical zone during the past three months has not been as effective as it had been during the previous reporting period. This was due primarily to the fact that the users of firefly did not fully understand the capabilities and limitations of this specialized fire team, to promote a better understanding of firefly techniques, tactical employments, capabilities, and problems encountered, a firefly conference was held at 145th Combat Aviation Battalion 30 May 1968.

Representatives from II Field Forces, III Corps, 12th Combat Aviation Group, 145th Combat Aviation Battalion, and the 334th Armed Helicopter Company participated in the conference. Results of the conference were highly beneficial, but it is felt that more effective utilization of firefly could be attained. Problems still encountered are:

(a) The individual tactical operations centers that are supported by firefly are not cognizant of the facts of the various tactical roles in which firefly can be utilized.

(b) Areas of operations assigned to firefly is not based on up to date intelligence. Firefly has limited time in each AO; therefore, it should search the most lucrative areas.

(c) Proper coordination of all ground and artillery personnel is not accomplished prior to firefly's arrival in the scheduled area of operation. Check fires are not adhered to while firefly is in the area.

(d) Observers that are sent with firefly are not properly briefed on the area of operations and do not possess the authority to grant clearances to fire within the AO.

(e) Missions have become stereotyped and have resulted in certain areas being unproductive.

(c) RECOMMENDATIONS:

(1) That all tactical operation centers be notified of firefly's various tactical roles in order that firefly will be utilized to its maximum advantage while in their particular AO.

(2) That firefly be utilized more as ESB (Emergency Stand-by) at night. When a ground unit comes under attack, firefly can employ its integral illumination and light fire team capability to maximum advantage.

(3) That the importance of ground unit and artillery coordination be continuously stressed because of firefly's limited time on station. Effective check fires will prevent missions from being aborted due to a lack of prior coordination and communication.

(4) That a quarterly firefly conference with representatives from II Field Forces, III Corps, 12th Combat Aviation Group, 145th Combat Aviation Battalion and 334th Armed Helicopter Company be conducted to solve any problem that may arise. To obtain maximum combat effectiveness from firefly, it will require a continuous process of educating all users on the capabilities, limitations, and tactical roles of firefly.

CONFIDENTIAL

CONFIDENTIAL

(3) Firing Angles for XM-229

(a) OBSERVATION: Firing angle for XM-229 warhead (17.5lb) from low altitude with shallow angles of attack causes maximum dispersion.

(b) EVALUATION: Firing from low altitudes and maximum range (less than 10° flight angle) results in maximum rocket drop and range dispersion. Firing from higher flight angles (above 15°) achieves maximum delivery accuracy. It was found that firing from the following ranges and altitudes, the sight setting remained approximately the same as for its M-151.

<u>RANGE (meters)</u>	<u>ALTITUDE (feet)</u>
500	500
1000	1000
1500	1500

(c) RECOMMENDATIONS: That steeper angles of attack (above 15°) be utilized for the XM-229 warhead, whenever possible, to insure more accurate delivery.

(4) Sight Settings

(a) OBSERVATION: Adding super-elevation for XM-229 firing is necessary for maximum accuracy.

(b) EVALUATION: The XM-229 warhead is seven pounds heavier than the M-151 (10lbs) warhead, however, the rocket motors are identical for both warheads. To compensate for the extra seven pounds of weight, a super-elevation of 50-80 mils (above setting for M-151) is required depending on range.

(c) RECOMMENDATIONS: That 50 mils of super-elevation be used as a "rule of thumb" for initial firing pass with XM-229 warhead.

(5) Delay Fuze

(a) OBSERVATION: Delay Fuze on XM-229 rocket would greatly enhance its effectiveness on certain targets.

(b) EVALUATION: The 17 pound warhead was found to be ideal for tree line targets, larger waterborne targets, hootches and fortifications-except heavily reinforced concrete bunkers. The 17 pound warhead with delay fuze would be more effective for a "bunker buster" than the super-quick fuze.

(c) RECOMMENDATION: That action be initiated to obtain and employ delay fuze for the 17 pound warhead to be used against reinforced bunkers.

(6) Evaluation of XM-229

(a) OBSERVATION: The new XM-229 has many advantages over the old 10 pound warhead.

(b) EVALUATION: The XM-229 warhead with PD fuze has a 30% increase in lethality over the M-151/PD. One 17 pound warhead packs more explosive power than a 105MM artillery round (5.0 lbs vs. 4.6 lbs of composition)

CONFIDENTIAL

CONFIDENTIAL

13

B-4). The larger lethal area and loss in maximum range (from 3000 to 2000 meters) of the XM-229 are very noticeable during firing. The new warhead does not change existing helicopter tactics and doctrine. However, troop safety criteria is a primary concern in its employment. Current training policy is that the 17 pound warhead will not be fired closer than 100 meters to friendly ground troops until additional experience with this warhead has been evaluated. This unit commenced utilizing the 17.5 pound warhead on an optional basis on 13 July 1968 with successful results and favorable comments from the pilots. It has been primarily utilized by the low ship on firefly. Utilizing the 17 pound warhead, one firefly destroyed five bunkers on the night of 19 July 1968.

(c) RECOMMENDATION: The XM-229/PD tremendously augments the firepower of our gunships. The training program as outlined in Circular Number 350-1, 1st Aviation Brigade, dated 7 June 1968, should be accomplished as soon as possible in order to increase the combat power of our organic aviation.

(7) Removal of Pilot/Co-pilot Doors on UH-1 Aircraft

(a) Observation: The removal of pilot compartment doors greatly enhances the safety of helicopters in a combat flying environment.

(b) Evaluation: Units of this battalion have been flying all combat assault and combat related missions with pilot compartment doors removed from the aircraft. The removal of these allows the following;

(aa) Increased visibility greatly assisting in airborne observation of other aircraft and is felt to greatly reduce the possibility of mid-air collisions.

(bb) Increased visibility in dusty landing and pick-up zones.

(cc) Increased visibility and safety is obtained when operating in an LZ or PZ during rain showers by permitting ground reference to the side when vision is obscured by rain on the aircraft windshield.

(dd) Elimination of shrapnel from doors and plexiglass.

(ee) Increased ground surveillance through the open area created by the removal of these doors.

(ff) Improvement of emergency escape capabilities..

(gg) Increased airflow in cockpit area reducing pilot fatigue caused by stuffy air and high temperatures.

The only disadvantages to removal of the doors is that protective measures must be taken to avoid damage to the console and its electrical equipment when the aircraft is in a static condition. This has been overcome by placing a poncho or a salvage piece of canvas over the radio console when the aircraft will remain on the ground for an extended period of

CONFIDENTIAL

time.

(c) RECOMMENDATION:

That all pilot compartment doors be removed from UH-1 helicopters that are directly involved in combat operations.

- c. Training: None
- d. Intelligence: None
- e. Logistics: None
- f. Organization: None
- g. Maintenance: None

(1) Hot End Inspections

(a) OBSERVATION: Hot-end inspections have been extended from 300 to 400 hours.

(b) EVALUATION: Since the extension of the hot-end inspections interval from 300 to 400 hours for the T-53 (L-11) engines, this unit has experienced an extensive increase in defects found during the inspection. During all inspections performed at the 400 hour interval, either a cracked N-1 flange or a warped N-1 flange or a combination of the two, was detected. Neither of these conditions had manifested itself by high EGT or power loss indications to suggest the conditions existed. As a result, considerable down time was experienced by the necessity to EDP required parts. With the exception of one engine, this was the initial hot-end inspection which indicates that this defect was occurring between 300 to 400 hours, but previously not being detected until the second inspection at 600 hours flying time was accomplished. These engines were installed on UH-1C aircraft which operate continuously at near gross weight and high N-1 power settings. This may have been a contributing factor. A severe aircraft availability problem was caused by a lack of anticipation of the problem and attempts were made to schedule maximum spacing between aircraft scheduled for inspections.

(c) RECOMMENDATION: That units monitor the hot-end time on engines and attempt to prevent the condition whereby aircraft become due for an inspection within a relatively short time. It can definitely create grave problems for all concerned.

(2) Rotor Blade Inspection:

(a) OBSERVATION: Daily inspection of UH-1C and AH-1G main rotor blades are necessary to detect early signs of blade separation.

(b) EVALUATION: Recent inspections and investigation have revealed UH-1C and AH-1G main rotor blades becoming unserviceable as a result of crack developing between the leading edge spar and

CONFIDENTIAL

15
extreme trailing edge and bond separation of grip plates which may continue inboard to retention bolt hole. The requirement of this inspection was established by urgent action TB 55-1520-211-20/8 dated 27 December 1966 "Inspection of UH-1C (540 UH-1B) Main Rotor Blades". Failure to perform this inspection daily will cause the aircraft status symbol to be changed to a red "X" condition. This is a special inspection along and beyond the inspection of blades specified in the applicable PMD checklist.

(c) RECOMMENDATIONS: That aircraft crews be directed to read TB 55-1520-211-20/8 dated 27 December 1966, "Inspection of UH-1C (540 UH-1B) Main Rotor Blades" to clarify the purpose of the inspection and the inspection procedures. That entry on DA Form 2408-13 be recorded as follows: DI of M/R blades due IAW TB 55-1520-211-20/8".

h. Safety: None

i. Signal:

1. AN/TRC-146 Radio Set

(a) OBSERVATION: Use of the HF radio set, AN/TRC-146, is not practical for units which are in close proximity to both their lower and higher echelons of command.

(b) EVALUATION: During the current reporting period this headquarters has continued using the AN/TRC-146 high frequency radio, and has done so with the employment of the 30 foot whip antenna. It has been found that at distances of less than 30 - 35 miles the system is less than 50% effective regardless of height or location. When stations are more than 40 or more miles distant, transmission and reception are somewhat dependant upon the location of the antenna; for example, if the antenna is located on top of a 90 foot pole the range is seemingly limited only by atmospheric conditions.

GARALD L. WALDRON
LTC, AT
commanding

CONFIDENTIAL

17

AVGC-SC (12 August 1968) 1st Ind

SUBJECT: Operational Report of the 145th Combat Aviation Battalion
for Period Ending 31 July 1968 (RCS CSFOR - 65) (RI)

DA, HEADQUARTERS, 12TH COMBAT AVIATION GROUP, APO 96266 22 August 1968

TO: Commanding General, VI Field Force Vietnam, ATTN: AVFEC-RE-H,
APO San Francisco 96266
ACofS for Force Development, DA (ACSFOR, DA), Washington, D.C. 20310

1. In compliance with AR 525-15 and USAF Regulation 525-15, two (2) copies of subject report are forwarded.

2. This headquarters has reviewed subject report and the following comments are made:

a. Reference page 10, items (3), (4) and (5) - These lessons learned are a duplication of comments and recommendations submitted to Headquarters, 1st Aviation Brigade in a letter, Headquarters 12th Combat Aviation Group, AVGC-SC, 27 April 1968, subject, Test/Training Program for Utilization of New Type Warheads for 2.75 inch VFR. The comments and recommendations are still valid.

b. Reference page 10, item (6) - Two (2) messages from this headquarters dated 110152Z June 1968 and 310422Z July 1968, have been sent to all units of the 12th Combat Aviation Group emphasizing rapid completion of training programs required by USAF Regulation 350-6, Training, XM 229 Warhead and XM 129 Proximity Fuze. The 145th Combat Aviation Battalion has indicated on 3 August 1968 that all required training within the battalion will be completed by mid-August 1968. Continued emphasis must be placed by commanders at all levels to use these new warheads so that with experience gained in their reliability and accuracy can reduce troop safety distances to a realistic figure.

c. Reference page 13, item i, Signal AN/TRC-146 Radio Set - This radio has since been transferred from the 145th Cbt Avn Bn to another unit who habitually operates over greater distances.

d. Reference Inclosure 2, Aircraft Status-Auth orizations for HHD and the 334th AHC are incorrect. Authorizations and O/H figures for the 10th AHC are incorrect. Correct figures are below:


- (1) HHD Auth 2 UH-1D/H, 3 OH-6A, 1 U-6A.
- (2) 334th AHC Auth 3 UH-1D/H 21 AH-1G.
- (3) 10th AHC Auth 1 UH-1D/H, 1 O/H; Auth 7 AH-1G, 7 C/H.
- (4) Change U-64 to read U-6A.

14

18
AVGC-SC (12 August 1968) 1st Ind
SUBJECT: Operational Report of the 145th Combat Aviation Battalion
for the Period Ending 31 July 1968 (RCS CSFOR - 65) (RI)

3. Concur with all other comments and recommendations.

FOR THE COMMANDER:


ROBERT A. WITCHER
Major, Armor
Asst Adjutant

19

AVFBC-RE-H (12 Aug 68) 2nd Ind
SUBJECT: Operational Report of the 145th Combat Aviation Battalion
for Period Ending 31 July 1968 (RCS CSFOR- 65 (RI))

DA, HQ II FFORCEV, APO San Francisco 96266 5 SEP 1968

THRU: Commanding General, 1st Aviation Brigade, ATTN: AVBA-C, APO 96307

Commanding General, US Army Vietnam, ATTN: AVHGC-DH, APO 96375

Commander-In-Chief, US Army Pacific, ATTN: GPOP-OT, APO 96558

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D.C. 20310

1. Subject report is forwarded.

2. This headquarters has reviewed and concurs with the Operational Report -
Lessons Learned of the 145th Combat Aviation Battalion for the period ending
31 July 1968.

FOR THE COMMANDER:



O. R. FORY
1LT, AGC
Asst AG

AVRA-C (12 Aug 68) 3d Ind

SUBJECT: Operational Report of 145th Combat Aviation Battalion for
Period Ending 31 July 1968 (RCS CSFOR-65 (HL) (U) (UIC: WCYRAA))

20

DA, HEADQUARTERS, 1ST AVIATION BRIGADE, APO 96384 SEP 14 1968

THRU: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST,
APO 96375

Commander in Chief, United States Army Pacific, ATTN: GPOP-OT,
APO 96558

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D.C. 20310

1. This headquarters has reviewed this report, considers it to be
adequate, and concurs with the contents as indorsed.

2. The following additional comments are considered pertinent:

a. Paragraph 2b(4), page 10. The super elevation referred to in
this paragraph applies to the sight setting and not the relative angle
between the rocket tube and the longitudinal axis of the aircraft.

b. Paragraph 2b(7), page 11. The removal of the pilot's/copilot's
doors on the UH-1 aircraft poses no unusual maintenance problems other
than the exposure to the weather of the console. Removal of doors should
be left to the discretion of the individual unit commanders.

c. Paragraph 2g(1), page 12. The increase from 300 to 400 hours
appears to have been beneficial in that deficiencies occurring after the
300 hour inspection, but prior to the 600 hour inspection, are now being
discovered in time to prevent failures.

FOR THE COMMANDER:



1LT, AGC

Assistant Adjutant General

21

AVHGC-DST (12 Aug 68) 4th Ind (U)

MAJ Klingman/hga/LBN 4433

SUBJECT: Operational Report of 145th Combat Aviation Battalion for
period ending 31 July 1968 (RCS CSFOR-65) (R1) (U)
(UCI:WCYNAA)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375 24 SEP 1968

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,
APO 96558

This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 July 1968 from Headquarters, 145th Combat Aviation Battalion, and concurs with the report as modified by the preceding indorsements.

FOR THE COMMANDER:


W. C. ARNTZ
CPTACC
Assistant Adjutant General

Cy furn:
HQ 1st Avn Bde
HQ 145th Cbt Avn Bn

22

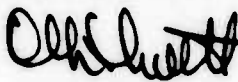
GPOP-DT (12 Aug 68) 5th Ind (U)
SUBJECT: Operational Report of HQ, 145th Combat Aviation Battalion for
Period Ending 31 July 1968 (RCS CSFOR-65) (R1) (U)

HQ, US Army, Pacific, APO San Francisco 96558 7 OCT 1968

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

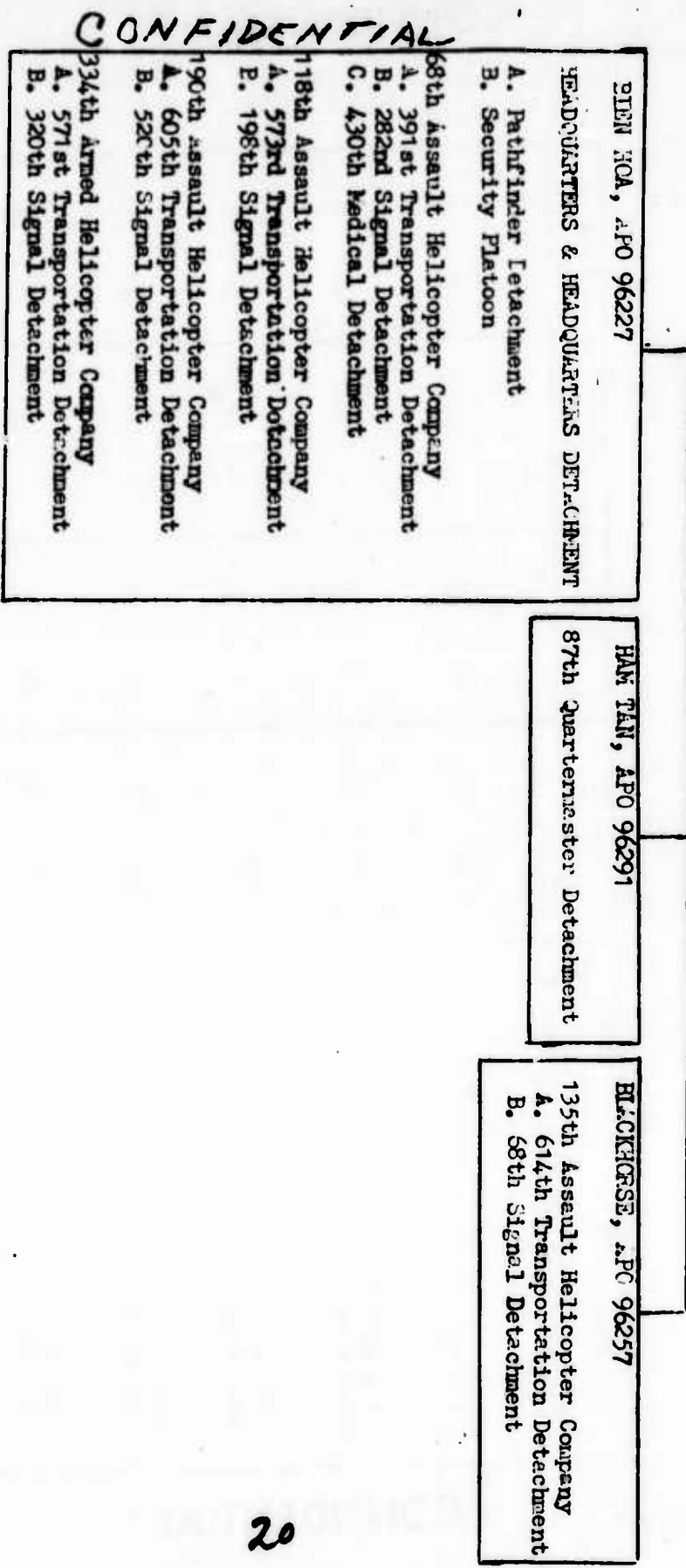
This headquarters has evaluated subject report and forwarding indorse-
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:



C. L. SHORTT
CPT, AGC
Asst AG

HEADQUARTERS, 145TH COMBAT AVIATION BATTALION



CONFIDENTIAL

23

Inclosure 1

20

CONFIDENTIAL

HEADQUARTERS, 145TH COMBAT AVIATION BATTALION
31 July 1968

AIRCRAFT STATUS

SUBORDINATE UNIT	UH-1C		UH-1D		UH-1H		UH-1G		UH-64	
	Auth	O/H	Auth	O/H	Auth	O/H	Auth	O/H	Auth	O/H
HQ, 145th Cbt Avn Bn	0	0	1	1	0	0	0	0	0	1
68th Aslt Hel Co 391st Trans Det	8	8	23	22	0	0	0	0	0	0
118th Aslt Hel Co 573rd Trans Det	8	7	23	22	0	0	0	0	0	0
135th Aslt Hel Co 614th Trans Det	8	7	23	0	0	21	0	0	0	0
190th Aslt Hel Co 605th Trans Det	8	7	23	22	0	0	0	0	0	0
334th Armed Hel Co 571st Trans Det	25	12	1	3	0	0	0	10	0	0
Cobra Net	0	0	0	0	0	1	0	1	0	0

Inclosure 2

CONFIDENTIAL

HEADQUARTERS, 145TH COMBAT AVIATION BATTALION

CONFIDENTIAL

ORDINATE UNITS	HOURS FLOWN	SORTIES FLOWN	TROOPS TRANSPORTED	CARGO (TONS) TRANSPORTED	ENEMY KIA	STRUCTURES DAM	DES	SAMFANS DAM	DES	AIRCRAFT LOST	AIRCRAFT DAM
68th Aslt Hel Co	7350	22513	46361	251	82	12	34	3	19	1	22
118th Aslt Hel Co	7464	18414	42054	371	48	31	29	1	47	1	16
135 Aslt Hel Co	7555	27115	50064	436	13	8	6	0	2	0	7
190th Aslt Hel Co	8070	26995	47278	380	10	0	79	0	39	1	10
334th Aslt Hel Co	4079	4711	533	0	265	24	180	11	481	0	17
Combat Hel Co	1590	1835	-	-	-	-	-	-	-	-	-
145th Cbt Avn BN TOTALS	36069	101,484	186,290	1438	418	75	328	15	588	3	72

CONFIDENTIAL

Inclosure 3

CONFIDENTIAL

26

EVALUATION OF AH-1G's on "FIREFLY"

(1) Initial test was conducted on the night of 19-20 June 1968, and test element was organized as follows; 1 UH-1D (Light Ship) and 2 AH-1Gs. Areas of operations included densely forested regions with an elevation of approximately 500' where minimum ground lights were available and where no visible horizon existed; and a sparsely vegetated area with an elevation of approximately 50' where numerous ground lights were available and where a horizon was visible to the west. After more than 5 hours of flight, no contact had been established, but numerous sampans were reported. Weather experienced was clear, to rainstorms, to low clouds.

(2) During the test, experiments were conducted using altitudes that varied from tree top level to 1500', and airspeeds that varied from 50 knots to 120 knots.

(3) Problems encountered were, extreme reflection on canopies from any light source; inaccuracy of attitude indicators, rain reflections on canopy; unresponsiveness of aircraft at speeds below 80 knots, and fluctuations of instruments when XM-18's were fired.

RECOMMENDATIONS:

(A) Organization;

- (1) UH-1D with dual door guns, light, and wind deflector.
- (2) 2 AH-1G's with optional weapons configuration.
- (3) FTL in lead AH-1G

(b) Basic tactical orientation:

- (1) UH-1D flies at 400'-700' and 70 to 80 knots. Observes and marks targets.
- (2) AH-1G's fly at 800'-1200', 90-120 knots. Provide cover for UH-1D and strike targets.

(c) Attitude indicators and aft position lights should be modified to assure operation.

(d) Personnel conducting tests were optimistic about potential of this mission and recommend continued evaluation.

CONFIDENTIAL

Inclosure 4

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author)		2a. REPORT SECURITY CLASSIFICATION	
HQ, OACSFOR, DA, Washington, D.C. 20310		Confidential	
3. REPORT TITLE		2b. GROUP	
Operational Report - Lessons Learned, HQ, 145th Combat Aviation Battalion (U)		4	
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)			
Experiences of unit engaged in counterinsurgency operations, 1 May - 31 Jul 68			
5. AUTHOR(S) (First name, middle initial, last name)			
CO, 145th Combat Aviation Battalion			
6. REPORT DATE		7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
12 August 1968		24	
8a. CONTRACT OR GRANT NO.		8b. ORIGINATOR'S REPORT NUMBER(S)	
b. PROJECT NO.		683129	
c. N/A		8c. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
d.			
10. DISTRIBUTION STATEMENT			
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY	
N/A		OACSFOR, DA, Washington, D.C. 20310	
13. ABSTRACT			
24			

DD FORM 1473
1 NOV 68

UNCLASSIFIED

Security Classification

29

The following items are recommended for inclusion in the Lessons Learned Index:

ITEM 1

* SUBJECT TITLE _____
 ** FOR OT RD # _____
 ***PAGE # _____

ITEM 2

SUBJECT TITLE _____
 FOR OT RD # _____
 PAGE # _____

ITEM 3

SUBJECT TITLE _____
 FOR OT RD # _____
 PAGE # _____

ITEM 4

SUBJECT TITLE _____
 FOR OT RD # _____
 PAGE # _____

ITEM 5

SUBJECT TITLE _____
 FOR OT RD # _____
 PAGE # _____

* Subject Title: A short (one sentence or phrase) description of the item of interest.

** FOR OT RD # : Appears in the Reply Reference line of the Letter of Transmittal. This number must be accurately stated.

***Page # : That page on which the item of interest is located.

30

- - FOLD - - -

DEPARTMENT OF THE ARMY

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

Office of the Assistant Chief of Staff for
Force Development
ATTN: Operational Reports Branch
Headquarters, Department of the Army
Washington, D.C. 20310

STAPLE

DA Label 18, 1 APR 66 PREVIOUS EDITIONS OF THIS LABEL ARE OBSOLETE.

- - FOLD - - -